In addition to the amendments above, Applicant submits remarks in response to the Examiner's findings:

REMARKS

Claim Rejections – 35 USC 102

Examiner states claims 1-10 are "anticipated by Jonathan Grove, US 2005/0007378 A1, 1/2005" and that "As per independent claim 1, Grove discloses (a) providing a module of area having distinct edges (i.e. cells) (Fig 2A "22"; pp. 2, Para 56), said module bearing a visual image of string segments arranged in a portion of a weave pattern (Fig. 2A; pp.2, Para 57) deliberately avoiding rotational symmetry (i.e. applying a simultaneous smooth warp along two coordinate axes, which creates a distinct and nonsymmetrical pattern) (Fig 11E), which, when placed in an arrangement with a multiplicity of other modules of substantially identical shape and appearance..."

Grove 2005/0007378 discloses a design referred to as a weave (Fig. 2A; pp 2, but the design demonstrably possesses rotational symmetry. The elements ("cells") shown within the module similarly possess rotational symmetry as well as bi-lateral symmetry. The present invention deliberately avoids such symmetry.

Grove 2005/0007378 discloses a method relying on the use of a computer to manipulate and store images. The present invention provides for a method to make a repetitive or non-repetitive weave design that may easily be employed simply by the use of lengths of common string, without the use of a modern computer and digital information storage and handling. Grove's method disclosed is not practical for use by those with limited computer or math skills. The present invention, which employs lengths of common string, can be shown to and repeated by an average high-school student to create a module, and once modules are created, the weave pattern modifications can be done by a pre-school child by simply rotating the modules. Applicant therefore respectfully submits that the present invention is novel.

Grove 2005/0007378 (Fig. 11a-e; pp. 2, Para. 37) discloses "warping" effects which achieve non-symmetry, but Applicant finds that the images produced using the Grove method do not preserve compatible edge boundary conditions for connecting the displayed images to other identical images. In more simple terms, Fig. 11e displays an area module, which, if rotated 90 degrees and placed next to another identical but non-rotated module, would result in some adjacent cells with the same color and others with the opposite color. The present invention provides for modules which guarantee by the method of their creation, that the joined edges of identical modules will provide texture continuity across the boundaries, regardless of the angles of rotation of each module. Applicant submits that this distinction illustrates the result of fundamental differences between the Grove 2005/0007378 method and the present invention.

Response to element of Examiner's rejection "As per independent claim 1, Grove discloses (a) providing a module of area having distinct edges (i.e. cells) (Fig 2A "22"; pp. 2, Para 56),...": Although Grove discloses cells (Fig 2A "22"), and edges (Fig 2A "24", "26","28", and "30"), it is necessary to mention these features as references for descriptions of concepts relating to tiling elements. The cells and edges are not the novelty of the inventions. Other prior art (US 5,011,411) discloses the same features, as does the present invention. The novelty of Grove over prior art and the novelty of the current invention over Grove and other prior art do not rely on these features.

> Applicant respectfully requests reconsideration and removal of this element of Examiner's rejection

Response to element of Examiner's rejection "...said module bearing a visual image of string segments arranged in a portion of a weave pattern (Fig. 2A; pp.2, Para 57)..." The "cells" in the Grove invention (Fig 2A "22"; pp. 2, Para 56) are the tiling elements in the area being decorated. Applicant observes that the weave pattern created by assembling these cells, when they are identical, (as displayed in Fig 2A; pp. 2), demonstrably possesses rotational symmetry. The elements ("cells") shown within the module similarly possess rotational symmetry as well as bi-lateral symmetry.

The present invention allows for the assembly of identical "cells" or tiling elements (pavers, tiles), each bearing a non-symmetric weave pattern, and providing for an overall weave pattern ("texture") modification bearing unique results for each angle of rotation of each identical non-symmetrically decorated tile (cell).

A further distinction between the cells of the Grove invention and the tiling elements made by the current invention is observed: Unlike the present invention, the Grove cell in the weave pattern does not contain a weave design within its boundaries. A weave pattern is only implied by juxtaposition with other similar non-woven cells.

> Applicant respectfully requests reconsideration and removal of this element of Examiner's rejection

Response to element of Examiner's rejection: "...deliberately avoiding rotational symmetry (i.e. applying a simultaneous smooth warp along two coordinate axes, which creates a distinct and nonsymmetrical pattern) (Fig 11E)..." If a cell is considered to be analogous to the tiling element of the present invention, the avoidance of rotational symmetry in Grove depends on changing the shapes of the tiling elements. The current invention provides for alteration of the weave pattern without change to the shapes of the tiling elements. They only need to be rotated.

If the texture (the entire displayed square with cells on it) is considered to be analogous to the tiling element of the present invention, it is observed that depending on the angle of rotation of one of the textures juxtaposed with others, continuity across boundaries of the textures is not provided. Grove's Figure 11A, if placed next to itself in a multiplicity, only provides for continuity across the boundaries for rotation angles of 0 or 180 degrees. Rotation of 90 or 270 degrees would place black cells next to black cells, disturbing the alternating black/white/black/white pattern. More obviously, Figure 11E, if rotated 90 180 or 270 degrees would result in discontinuity across the boundaries to adjacent identical non-rotated textures.

Unlike the present invention, Grove's non-symmetrical pattern is made at the cell level by distorting the cell shape and position. At the texture level, it is made by distorting cells without providing for continuity across boundaries to adjacent cells with arbitrary angles of rotation. The present invention provides for manipulation of the weave design by rotating individual identical modules and does not require or employ modifying the modules to effect the weave modification.

> Applicant respectfully requests reconsideration and removal of this element of Examiner's rejection

Response to element of Examiner's rejection: "...which, when placed in an arrangement with a multiplicity of other modules of substantially identical shape and appearance, said modules with said edges aligned edge-to-edge (Fig. 2A; pp.2, Para 56)," Although Grove discloses cells placed in an arrangement with a multiplicity of other modules of substantially identical shape and appearance, said modules with said edges aligned edge-to-edge, it is necessary to mention these characteristics as references for descriptions of concepts relating to tiling elements. These characteristics are not the novelty of the inventions. Other prior art (US 5,011,411, pp. 7, col. 2, line 20) discloses the same characteristics, as does the present invention. The novelty of Grove over prior art and the novelty of the current invention over Grove and other prior art do not rely on these characteristics.

Further response to element of Examiner's rejection: "...which, when placed in an arrangement with a multiplicity of other modules of substantially identical shape and appearance, said modules with said edges aligned edge-to-edge (Fig. 2A; pp.2, Para 56)," (Continuity) (Fig. 2A; pp.2, Para 56) Grove's invention provides for continuity of the texture (Fig 2A "20"; pp. 2, Para. 55-57) when the horizontal edges are "wrapped" or when the vertical edges are wrapped. However, if the "texture" were rotated 90 degrees, the continuity would not be guaranteed by Grove--A vertical edge of Grove's cells cannot properly wrap to a horizontal edge. Grove's intent in the claim language is not to provide for this. By contrast, the present invention provides for continuity across the entire texture (area

covered with tiling elements) regardless of the orientation of any of the cells or the choice of wrapping direction of cells.

> Applicant respectfully requests reconsideration and removal of this element of Examiner's rejection

Response to element of Examiner's rejection "Forms a continuous area bearing the visual image of a continuous weave design (Fig 2A),..." Although a continuous area and a continuous weave image are disclosed by Grove, the novelty of Grove 2005/0007378 is not that it forms a continuous area bearing the visual image of a continuous weave design (Fig 2A), and these characteristics are not the novelty of the present invention. The novelty of the present invention is the ability for a multiplicity of identical rotationally non-symmetric cells or tiling elements to provide for a weave design, which can be manipulated or altered by simply rotating any or all of the identical cells.

> Applicant respectfully requests reconsideration and removal of this element of Examiner's rejection

Response to element of Examiner's rejection "...(b) Assembling said modules of area to form said continuous weave design which is varied by selective orientation of any or all of said modules (Fig. 11 C, D; pp. 4, Para 81-84, 88)..." (Orientation vs. "warping"): Grove does not vary the weave design in his textures by selectively orienting the cells or the textures, as the present invention does. By contrast, Grove (Fig. 11 C, D; pp. 4, Para 81-84, 88) provides for variation of the designs by distorting or warping the cells, which would be analogous to changing the shapes of the modules of the present invention.

For more comprehensive analysis, Applicant will consider this comparison to Grove 2005/0007378 at two levels:

> The first level is where a "cell" is analogous to the tiling element of the present invention, and the "texture" is analogous to the area to be tiled in the present invention. This is suggested by Grove figure 2A.
>
> The second level is where a "texture" is analogous to one of the tiling elements of the present invention, and a collection of juxtaposed "textures" is analogous to the area to be tiled in the present invention. This is suggested by Grove figures 3A and 3B

First Level: If a cell is considered to be analogous to the tiling element of the present invention, the avoidance of rotational symmetry in Grove depends on changing the shapes of the tiling elements. The current invention provides for alteration of the weave pattern without change to the shapes of the tiling elements. They only need to be rotated. Unlike the present invention, which employs

identical modules, Grove's non-symmetrical pattern is made at the cell level by distorting the cell shape and position.

Second Level: If the texture (the entire displayed square with cells on it) is considered to be analogous to the tiling element of the present invention, it is observed that depending on the angle of rotation of one of the textures juxtaposed with others, continuity across boundaries of the textures is not provided. Figure 11A, if placed next to itself in a multiplicity, only provides for continuity across the boundaries for rotation angles of 0 or 180 degrees. Rotation of 90 or 270 degrees would place black cells next to black cells, disturbing the alternating black/white/black/white pattern. More obviously, Figure 11E, if rotated 90 180 or 270 degrees would result in discontinuity across the boundaries to adjacent identical non-rotated textures. Furthermore, it is observable in Figure 3B that adjacent "textures" rotated 90 degrees from the shown orientations would result in discontinuity in the pattern, or errors in the "wrapping" between adjacent edges. The present invention provides for continuity of the weave pattern across the boundaries of adjacent tiling elements regardless of the orientation of the elements.

Unlike the present invention, Grove's non-symmetrical pattern is made at the texture level by distorting cells without providing for continuity across boundaries to adjacent cells with arbitrary angles of rotation

> Applicant respectfully requests reconsideration and removal of this element of Examiner's rejection

Response to element of Examiner's rejection "...Whereby one can create any repetitive or non-repetitive variation (Fig. 2A; pp. 2, Para 57, 61)..." Varying the cell's sizes, shapes, positions, and individual images effects Grove's variation of designs. By contrast, the variation of patterns in the present invention is accomplished by rotating any or all of the identical modules covering the area.

> Applicant respectfully requests reconsideration and removal of this element of Examiner's rejection

Response to element of Examiner's rejection: "...of said continuous weave design from said substantially identical modules by simply selectively orienting said modules (pp. 4, Para 88)..." Groves disclosure (pp. 4, Para 88) details the steps required for a computer program to manipulate pixels within a cell to apply warping to the cell. Warping the cell results in the cells being non-identical within the texture, essentially modifying the "X" and "Y" vector characteristics of the cells, unlike the present invention, where the modules remain identical, and the variation is accomplished by rotating the modules about a vector normal to the surface being tiled, or the analogous "Z" vector, orthogonal to X and Y.

Applicant respectfully requests reconsideration and removal of this element of Examiner's rejection

Response to element of Examiner's rejection: "As per dependent claim 2, Grove discloses wherein said area module is a regular polygon..." Uniqueness of Dependent claim 2 is predicated on validity and uniqueness of of independent claim 1. The polygon characteristics alone are not novel, but the method of claim 1 applied to a polygon is.

Provided independent claim 1 is allowed, Applicant respectfully requests reconsideration and removal of this rejection of dependent claim 2

Response to element of Examiner's rejection: "As per dependent claim 3, Grove discloses wherein said area module is based on a regular polygon, with the added feature that said edges are curved (Fig. 2E; Fig. 11A, C & D)." Observation of Grove Fig. 2E shows that the texture "20" has straight edges and an overall square or rectangular shape with circular or curved sets of lines displayed thereon. By contrast, the present invention discloses application of the method of independent claim 1 to a module (analogous to Grove's "texture") with curved edges as shown in US 2004/0154682 A1 Figure 12; pp. 3, Para. 53-54.

Furthermore, Grove's textures as disclosed in 2005/0007378 A1 are more narrowly defined as follows (pp. 2, Para. 55) "in general, this is a rectangle the same height and width as the final texture."

Grove's referenced figures 11A, C & D illustrate rectangular "textures" decorated with cells that have curved shapes due to the warping process (X and Y displacement and resizing). The cells within the textures are not identical cells, and cannot be rotated individually within the texture to form a continuous weave pattern. Dependent claim 2 of the present invention employs identical modules which have curved edges that nest against adjacent modules for continuity, but still allow for rotation of individual modules to modify the weave design.

Provided independent claim 1 is allowed, Applicant respectfully requests reconsideration and removal of this rejection of dependent claim 3

Response to element of Examiner's rejection: "As per dependent claim 4, discloses wherein said string segments are replaced by linear graphic designs (i.e color) (pp. 6, Para 115-118)" Uniqueness of Dependent claim 4 is predicated on validity and uniqueness of of independent claim 1. The linear graphic design characteristics alone are not novel, but the method of claim 1 with the additional enhancement of applied linear graphic designs in place of the simple strings is novel.

Provided independent claim 1 is allowed, Applicant respectfully requests reconsideration and removal of this rejection of dependent claim 4

Response to element of Examiner's rejection: "As per dependent claim 5, discloses wherein said area modules are assembled on a display screen of a computer (i.e. generated texture, e.g. weave pattern, is displayed on a computer) (pp. 2, Para a53 & 54) Tiled surface displays on computer screens are commonplace, especially in the most modern web pages, where backgrounds are made from the tiling of small pixilated images to fill customized or user-adjustable window sizes. This alone is obviously not novel. The novelty of the present invention's dependent claim 5 is from the application of the method from independent claim 1 to the computer-displayed tiled image. Grove's disclosure details how to make images and how a computer can be used to manipulate them for the sake of display, but the method of the present invention's claim 1 is unique from that of Grove, and produces the un-anticipated result of allowing manipulation of the overall weave pattern by simply rotating any or all of the modules.

Provided independent claim 1 is allowed, Applicant respectfully requests reconsideration and removal of this rejection of dependent claim 5

Reconsideration of the application as amended and with consideration for the above notations is respectfully requested

Respectfully submitted,

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Date: June 29, 2007

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